JAPAN

EDICT OF GOVERNMENT

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JIS B 6550 (1991) (English): Band dryer -- Test and inspection methods

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The citizens of a nation must honor the laws of the land.

Fukuzawa Yukichi

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JIS

JAPANESE INDUSTRIAL STANDARD

Band dryer — Test and inspection methods

JIS B 6550—1991

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In the event of any doubt arising,
the original Standard in Japanese is to be final authority.

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JAPANESE INDUSTRIAL STANDARD J I S

Band dryer - Test and inspection methods B 6550-1991

1. Scope

This Japanese Industrial Standard specifies the construction, nominal sizes, functional tests, running tests, and methods of inspection on accuracies and of inspection on machining accuracies of the band dryers for veneers of 2500 mm or over to 4200 mm or under in width of wire gauze, 2 steps or over in number of steps, 5 or over in number of heating sections, and of straight advancing type(1), single turnback type(2) and double turnbacks type(3).

Notes (1) That type of band dryer in which the workpiece is conveyed in a straight advance (abbreviation Type D).

(2) That type of band dryer in which the workpiece is conveyed in a single turnback (abbreviation Type U).

(3) That type of band dryer in which the workpiece is conveyed in double turnbacks (abbreviation Type S).

Remarks 1. The applicable standard to this Standard is as given in the following:

JIS B 6521-Methods of measurement for noise emitted by wood working machinery

2. In the Standard, the units and numerical values given in { } are in accordance with the traditional units and are appended for informative reference.

2. Construction

Taking thermal deformations into consideration, the respective parts of the band dryer shall be those having sufficient rigidity respectively so that inflicting no ill influence on the machining accuracies.

3. Nominal sizes

The nominal sizes of the band dryers shall be in accordance with Table 1, being expressed by the widths of the wire gauzes (mm).

Table 1. Nominal dimensions

Unit: mm

Nominal size	Width of wire gauze	
	Dimension	Tolerance
2500	2500	± 50
2800	2800	
3000	3000	
3200	3200	
3400	3400	
4200	4200	

Remarks: The band dryer shall be designated by the name, nominal size, number of steps (type) and number of heating sections.

Example: Band dryer 2800 x 4 (S + D) x 10

4. Methods of functional tests

The functional tests for the band dryers shall be in accordance with Table 2.

Table 2. Functional tests

No.	Test item	Testing method
1	Electric equipment	Before and after the running test, examine the insulating condition once each.
2	Feeding device	Examine the reliability and smoothness of function and the correctness of indications.
3	Feed of work piece	Examine the reliability and smoothness of function.
4	Blower	Examine the smoothness of function.
5	Heat insulating equipment	Examine the reliability of functions for valves, traps, and others.
6	Lagging equipment	Examine the reliability of function and leakage of hot air.
7	Suction-exhaust equipment	Examine the smoothness of functions.
8	Safety devices	Examine the reliabilities of safety functions for operators and of mechanical protecting functions.
9	Lubricating equipment	Examine the smoothness and reliability of function.
10	Accessories	Examine the reliabilities of functions.

Remarks: For a band dryer which is not provided with any one of the foregoing functions, the corresponding test item in Table 2 shall be omitted.

5. Running test methods

After the interior of the machine has attained the working temperature([4]), measure required electric power and noise under a working feed speed([4]), and observe abnormal vibration by the sense of touch, concurrently with taking a record of each item specified in Table 3 Record Form 1.

Furthermore, the measurement of the noise shall be in accordance with JIS B 6521.

Table 3. Record Form 1

No.	Measuring time hour and minute	Working temperature °C	Working feed speed m/s	Blower						Heating equipment							Required electric power								
				Heating			Cooling			Steam		Others		Opening of exhaust hole	Temperature at heating section(5) °C		Voltage V	Current A			Input kW	Noise A-weighted dB	Room temperature °C	Wire gauze travelling condition	Description
				Air quantity m³/min	Air pressure Pa or {mmAq}	Bearing temperature °C	Air quantity m³/min	Air pressure Pa or {mmAq}	Bearing temperature °C	Pressure MPa or {kgf/cm²}	Consumption kg/h	Name of fuel	Consumption		Left	Right		Conveying device	Heating blower	Cooling blower					

Note (5) The measuring position of temperature of the heating section shall be approximately 300 mm inside from the end face of the net.

Remarks: Matters regarding the measuring conditions of the noise shall be recorded in the description column.

6. Methods of inspection on accuracies

The inspection on accuracies of the band dryer shall be in accordance with Table 4.

Table 4. Inspection on accuracies

Unit: mm

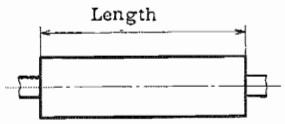
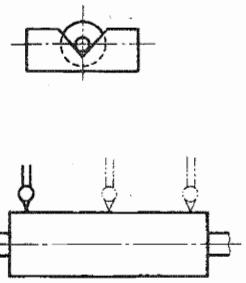
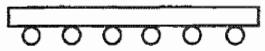
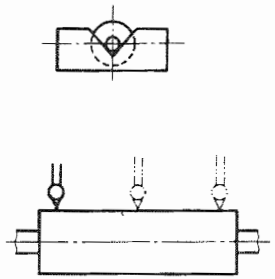
No.	Inspection item	Measuring method	Figure for measuring method	Permissible value	
1	Reciprocal variation on lengths of backup rolls	Apply a steel tape measure in parallel with each backup roll, measure the length of the back-up roll, and consider the maximum difference of readings to be the measured value.		3	
2	Runout on backup roll	Apply a test indicator to the backup roll which is supported at both ends as given in figure, rotate the backup roll with hand, and consider the maximum difference of readings of test indicator during rotation to be the measured value. In this case, measure at 3 or more places of the center and both ends.		Length of roll	
				3400 or under	Over 3400
				2	3
3	Flatness of backup roll of each step	Apply a straightedge on arbitrary 6 pieces or more of backup rolls in feed direction, and measure the clearance between the backup roll and the straightedge with a clearance gauge. Carry out these measurements at near the both ends of each backup roll, and consider the maximum value to be the measured value.		1.5	2.0

Table 4 (Continued)

Unit: mm

No.	Inspection item	Measuring method	Figure for measuring method	Permissible value	
4	Runout of end roll	Apply a test indicator to the end roll which is supported at its both ends as given in figure, rotate the end roll with hand, and consider the maximum difference of readings of the test indicator during rotation to be the measured value. In this case, measure at 3 or more places of the center and both ends.		2	3

Remarks: The maximum difference mentioned here means the difference between the maximum value and the minimum value which has been obtained in accordance with the designated measuring method.

7. Methods of inspection on machining accuracies

The inspection on machining accuracies of the band dryer shall be in accordance with Table 5.

Table 5. Inspection on machining accuracies

No.	Inspection item	Measuring method	Permissible value
1	Dispersion of moisture contents on finished products	Dry a veneer([6]) by 10 m or over in length, leave it alone for 2 h after cutting([7]), measure the moisture contents at 3 points of the center and both ends on the diagonal of the veneer, and express the dispersion in the ratio of the difference between the maximum and the minimum of the mean values on respective position to the gross mean value thereof. Carry out this measurement on each type.	0.25
2	Tear([8])	Dry the veneer of medium quality by the length of its type or over, and examine for the presence of tears.	No tear shall be found.

Notes ([6]) The test veneer shall be that of the same species of tree and the similar conditions.

([7]) The cut width shall be approximately 0.9 to 1.2 m.

([8]) A condition of a continuous veneer which is separated over the overall length in fibrous direction.

Remarks: The test veneer shall be inserted under a normal operating condition.

B 6550-1991
Edition 1

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